ABSTRACT OF THE DISCLOSURE

A process for producing a polyol by reacting an aliphatic aldehyde with formaldehyde in the presence of a basic catalyst, which comprises a step of concentration which comprises removing water and unreacted formaldehyde from a reaction liquid by distillation; a step of extraction which comprises extracting the polyol from a concentrated reaction liquid with an extracting reagent; a step of washing with water which comprises washing an extract liquid with water and separating the liquid into an oil layer containing the polyol and an aqueous layer; wherein by useing an specific aliphatic aldehyde as the extracting agent and recovering the extracting reagent from the oil layer containing the polyol after adjusting pH of the oil layer, a high purity polyhydric alcohol can be obtained at a high yield with suppressed formation of byproducts such as acetal compounds and aldol compounds.